

FIG.2

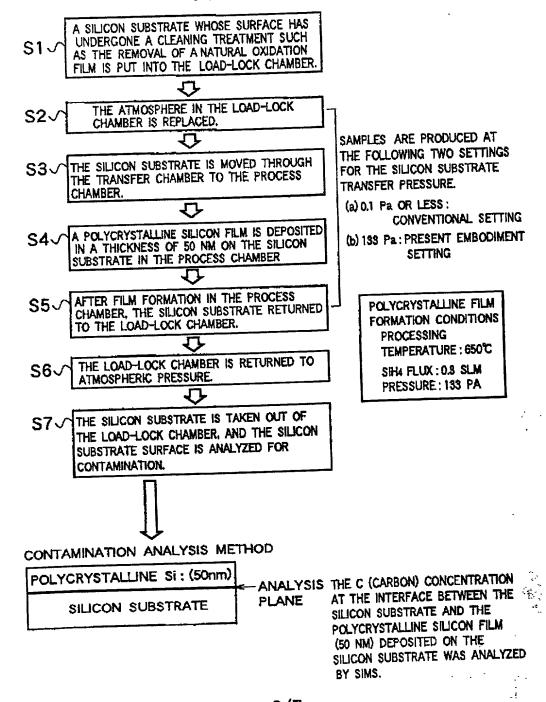


FIG.3

| SUBSTRATE TRANSFER PRESSURE | | CARBON CONCENTRATION (atoms/cm²) |
|--------------------------------|---------------------------------------------------|----------------------------------|
| (A) CONVENTIONAL SETTING | ATTAINABLE VACUUM TRANSFER 0.1Pa OR LESS | 1,90×10 ¹⁴ |
| (B) PRESENT EMBODIMENT SETTING | 133Pa | 3.70×10 ¹³ |
| | | |

5.0×10¹² atoms/cm² (BEST DATA)

FIG.4

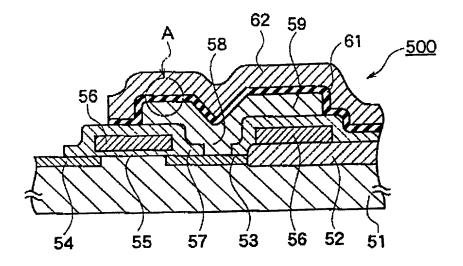


FIG.5

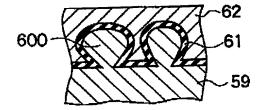
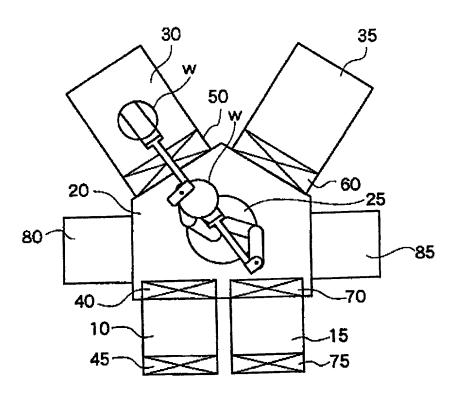


FIG.6



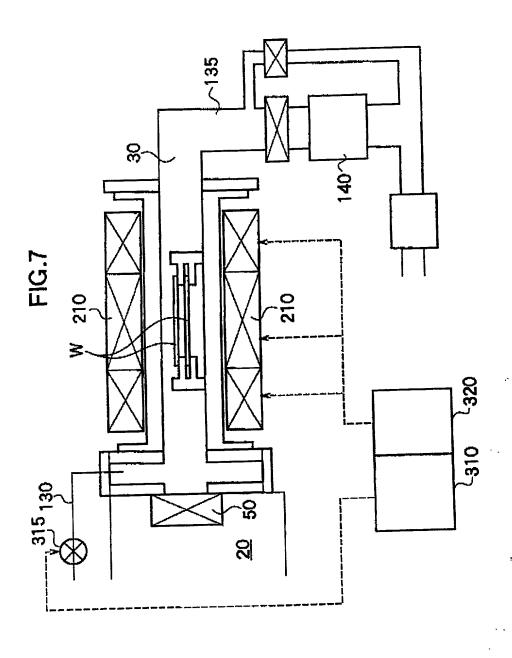
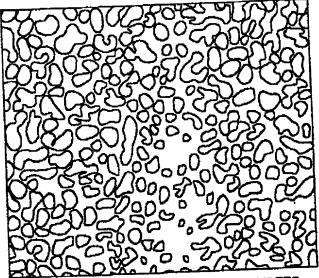
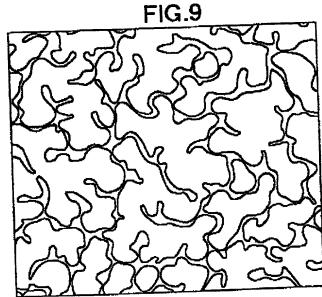


FIG.8



WITH ATTAINABLE VACUUM TRANSFER INADEQUATE HSG FORMATION (LACK OF SURFACE BUMPINESS) DUE TO CONTAMINATION OF WAFER SURFACE



WITH NITROGEN GAS SUPPLY: 0.5 sim, 50 Pa ADEQUATE HSG FORMATION (VERY BUMPY SURFACE)